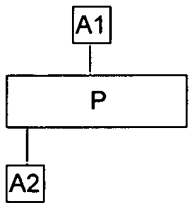
AMENDMENTS TO THE CLAIMS

The present amendment cancels claims 1-7, 20-31, 36-38 and 41-43. According to 37 C.F.R. § 1.121(c), after entry of the present amendment, the following claims are in the case:

Claims 1-7 cancelled

8. (Previously Presented) A method according to claim 1, which is carried out in solution, comprising the steps of:

a) Preparing a linear peptide of General Formula III



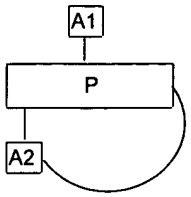
General Formula III

where P is a linear peptide of 1 to 15 monomers;

A1 is one or more N-substituents, either reversible or non-reversible, on the peptide backbone, or is a chemical moiety that forces a *cis* conformation of the backbone, and

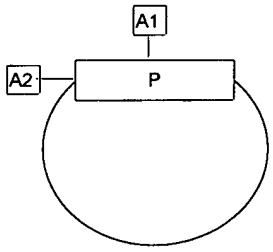
A2 is a covalently-bonded group of atoms comprising a reactive functionality to form an initial large cyclic peptide prior to ring contraction to the desired substituted cyclic peptide;

b) Activating the *C*-terminus to form a cyclic peptide of General Formula IV:



General Formula IV

c) Permitting the peptide of General Formula IV to rearrange via a ring contraction reaction (which may occur spontaneously) to form a cyclic peptide of General Formula V; and optionally



General Formula V

d) Subjecting the cyclic peptide of General Formula V to a deprotection reaction to remove the groups A1 and A2 to yield the desired cyclic peptide of General Formula I.

9. (Original) A method according to claim 8, in which P is a linear peptide of 1 to 10 monomers.

10. (Original) A method according to claim 9, in which P is a linear peptide of 1 to 5 monomers.

11. (Previously Presented) A method according to claim 8, in which A1 and/or A2 is left attached to the peptide.

12. (Original) A method according to claim 11, in which A1 and/or A2 is subsequently linked to a solid support, derivatised, or linked to another cyclic peptide or peptidomimetic compound.

13. (Previously Presented) A method according to claim 8, in which A1 is a reversible N-substituent.

14. (Original) A method according to claim 13, in which A1 is a 2-hydroxy-4-methoxybenzyl, 2-hydroxybenzyl or 2-hydroxy-6-nitrobenzyl substituent.

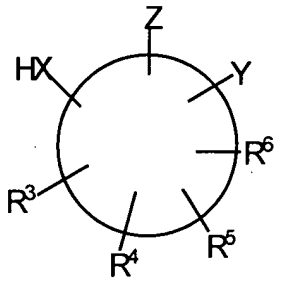
15. (Previously Presented) A method according to claim 8, in which A2 is eliminated by spontaneous ring contraction.

16. (Previously Presented) A method according to claim 8, in which A2 comprises a nucleophile that reacts rapidly with a *C*-terminus to form an initial large ring, which then contracts either spontaneously, or upon heating or additional chemical treatment.

17. (Original) A method according to claim 16, in which A2 is thiol or hydroxyl.

18. (Previously Presented) A method according to claim 8, in which A2 is an irreversible substituent, is removed after ring contraction, or is eliminated spontaneously upon ring contraction.

19. (Previously Presented) A method according to claim 8, in which A2 is a compound of general formula (a):



(a)

in which the ring

(a) optionally comprises one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulphur;

(b) is of 5 to 7 atoms;

(c) comprises 3 carbon atoms substituted respectively by XH, Z, and Y; and

(d) is additionally substituted by groups R^3 and R^4 when the compound is a 5-membered ring, or is additionally substituted by groups R^3, R^4, and R^5 when the compound is a 6-membered ring, or is additionally substituted by groups R3, R4, R5 and R6 when the compound is a 7-membered ring,

in which

X is oxygen, sulphur, CH_2O-, or CH_2S-;

Y is an electron-withdrawing group;

Z is any group which allows the formation of a covalent carbon-nitrogen bond; and

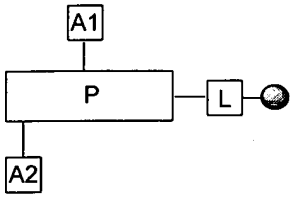
R^3, R^4 and R^5 are each independently hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heteroaryl, substituted heteroaryl, alkoxy, aryloxy, XH or Y, or a covalent linkage to a solid support, and

in which R^3 and R^4 or R^4 and R^5 can optionally together with the ring form a 5-, 6-, or 7- membered ring.

Claims 20-31 cancelled

32. (Original) A method of solid phase synthesis of a cyclic peptide, comprising the steps of

a) synthesis of a linear solid support-bound peptide of General Formula XIII,



General Formula XIII

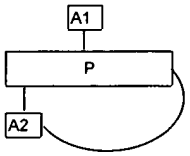
where P is a linear peptide of 1 to 15 monomers;

A1 is one or more N-substituents, either reversible or non-reversible, on the peptide backbone, or is a chemical moiety that forces a *cis* conformation of the backbone, and

A2 is a covalently-bonded group of atoms comprising a reactive functionality to form an initial large cyclic peptide prior to ring contraction to the desired substituted cyclic peptide;

L is a linker between any atom of the peptide and the solid support, and

b) subjecting the peptide of General Formula XIII to cyclisation and concomitant cleavage from the solid support to yield a cyclic peptide of General Formula XIV,



General Formula XIV

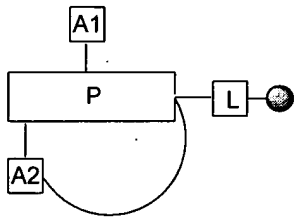
c) subjecting the cyclic peptide of General Formula XIV to ring contraction (which may be spontaneous), and

d) cleaving the groups A1 and A2 to yield the desired cyclic peptide of General Formula I.

33. (Original) A method of solid phase synthesis of a cyclic peptide, comprising the steps of;

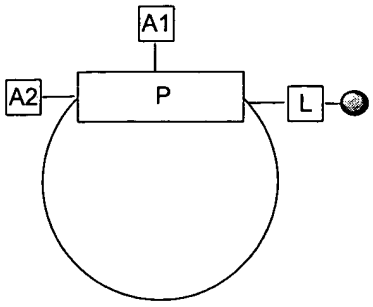
a) synthesis of a linear solid support-bound peptide of General Formula XIII,

b) subjecting the linear peptide to cyclisation on the solid support to yield a cyclic peptide of General Formula XV,



General Formula XV

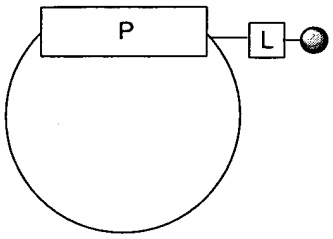
c) subjecting the cyclic peptide to ring contraction (which may occur spontaneously) to yield a cyclic peptide of General Formula XVI,



General Formula XVI

and either

d) cleaving groups A1 and A2 while the peptide is bound to the solid support to yield a resin-bound cyclic peptide of General Formula II, or



General Formula II

e) subjecting the cyclic peptide to deprotection and concomitant cleavage from the solid support to yield the desired cyclic peptide of General Formula I.

34. (Original) A method according to claim 33, in which side chain deprotection of the peptide, removal of A1 and cleavage from the solid support are performed separately.

35. (Original) A method according to claim 33, in which side chain deprotection of the peptide, removal of A1 and cleavage from the solid support are performed concurrently.

Claims 36-38 cancelled

39. (Previously Presented) A method according to claim 32, in which one or more of the monomers carries a side chain protecting group.

40. (Previously Presented) A method according to claim 33, in which one or more of the monomers carries a side chain protecting group.

Claims 41-43 cancelled

RESPONSE

I. Restriction Requirement

The Requirement has taken the position that the pending claims are drawn to three inventions that are allegedly not linked so as to form a single general inventive concept under PCT Rule 13.1. The inventions are set forth as:

Group I: Claims 1-7, 20-26, 36, 37 and 41-43, said to be drawn to a cyclic peptide, a composition containing the cyclic peptide, and a method of synthesis of a cyclic peptide or peptidomimetic compound of general formula I or II, either in solution or via solid-phase synthesis, by N-substitution or using a chemical moiety that forces a cis amide bond conformation to facilitate cyclization;

Group II: Claims 27-31 and 38, said to be drawn to a method of solid-phase synthesis of a cyclic peptide by preparing a linear resin-bound peptide containing A2, where A2 is a reactive functional group, to form an initial large cyclic peptide prior to ring contraction to the desired substituted cyclic peptide; and

Group III: Claims 8-19, 32-35, 39 and 40, said to be drawn to a method of synthesis of a cyclic peptide or peptidomimetic compound of general formula I or II, either in solution or via solid-phase synthesis, by preparing a linear peptide of general formula III or XIII containing A1 and A2, where A1 is an N substituent or a chemical moiety that forces a cis amide bond conformation, and A2 is reactive functional group, to form an initial large cyclic peptide prior to ring contraction to the desired substituted cyclic peptide.

The class and subclass of the inventions are not set forth.

II. Unity of Invention

As indicated in the Requirement, the appropriate standard for assessing the claims of the present application is unity of invention under PCT Rules 13.1 and 13.2. Rule 13.1 requires that the claims be linked so as to form a single general inventive concept, and Rule 13.2 requires that there be a technical relationship between the claims involving one or more of the same or corresponding special technical features.

All claims were held to have unity of invention during the PCT examination phase, thus indicating a technical relationship between all claims involving one or more of the same or corresponding special technical features. As indicated in the Preliminary Amendment of record, all claims were also held to be novel and inventive during PCT examination. Aside from these findings, the Office has chosen to enter a restriction requirement in the present case.

III. Election

Despite the unity of invention established during PCT examination, Applicants presently elect the Group III invention without traverse. Applicants reserve the right to pursue claims of the non-elected inventions in divisional or other applications claiming priority to the present case.

IV. Claims 30 and 31

The Office helpfully indicated that claims 30 and 31 cite A1, whereas there is no A1 in claim 27 (Requirement at page 2, Item 2). This reflects a clerical error. As claims 30 and 31 are not included within the presently elected invention, this matter can be addressed in any divisional application encompassing the Group II invention.

V. Further "Selections"

The Requirement further indicates that should Group III be elected, Applicants are also required to make several further "selections". In particular, to select one ring size, an aromatic or cyclic alkyl structure as A2, one heteroatom or carbon in the ring structure, and one functional group each of for X, Y and Z from claim 19 (Requirement at page 3).

The Requirement at page 3 indicates that these "selections" are not species elections. As all such "selections" are all to be made from the Group III invention, Applicants therefore assume that such "selections" reflect sub-species as an initial point for search and examination.

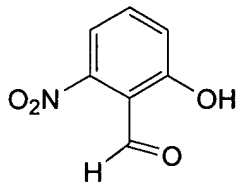
Without agreeing with the propriety for requiring such selections, Applicants hereby select the following:

a ring size of 6;

X as oxygen;

Z as carbonyl; and

Y as a nitro group, as shown in the structure below:



VI. Status of the Claims

Prior to the present Requirement, claims 1-43 were in the case. Presently, claims 1-7, 20-31, 36-38 and 41-43 have been canceled without traverse as drawn to non-elected inventions. No claims have been amended or added.

Claims 8-19, 32-35, 39 and 40 are therefore in the case. In accordance with 37 C.F.R. § 1.121, the pending claims are listed in the amendment section.

VII. Conclusion

This is a complete response to the referenced Requirement. The response is timely filed in light of the Federal Holiday on June 11, 2004. Therefore, no fees should be required. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary, Applicants respectfully request a telephone call to the undersigned representative to discuss deduction from Applicants' representatives' Deposit Account No. 50-0786/4050.001200.

All claims are believed to be in condition for allowance and an indication to this effect is respectfully requested. Should the Office have any questions, a telephone call to the undersigned Applicants' representative is earnestly solicited.

Respectfully submitted,
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Date: June 14, 2004